

**MONTANA FISH, WILDLIFE & PARKS  
PROJECT PERFORMANCE REPORT**

**STATE:** MONTANA  
**GRANT TITLE:** Burbot Status Assessment  
**AGREEMENT:** T - 4 - 2  
**PERIOD COVERED:** April 5, 2004 through December 31, 2004

**Objective**

The objective of this project was to complete a comprehensive status assessment of burbot in Montana.

**Location**

This project involved soliciting and compiling information from throughout western Montana where burbot are known or suspected to occur.

**Discussion**

Burbot are a cold water, bottom-dwelling fish that typically range from 15-22 inches in length, although they can reach lengths up to 46 inches. They typically weigh 1-3 pounds, but can grow as heavy as 12 pounds. They are long-lived, up to 14 years, and do not reach reproductive maturity until they are 3-4 years of age. Burbot are a reclusive fish that prefer to be near the bottom in areas of low light, and are typically found in the deepest waters available, as well as areas with aquatic vegetation, rock piles, submerged logs, and other underwater structures where they can hide during the day. Because of their use of deep-water habitat and their limited sport fish potential, not much is known about burbot population status and trends. Despite a lack of comprehensive population trend data, there is increasing anecdotal concern about the status of burbot. A survey of Montana fisheries biologists indicated that biologists whose areas cover 73% of the species range in Montana are concerned about the burbot's current status. Biologists in several drainages are reporting seeing fewer and fewer burbot in their monitoring areas. Anglers who regularly fish for burbot have expressed concern about fewer and smaller fish in some of the areas where they fish.

In order to gain a better understanding about quantity and quality of data available about burbot in Montana, and to prioritize research and monitoring needs, it was felt that a comprehensive status assessment was required. Therefore, this project was designed to compile and synthesize existing data, as well as query biologists about their thoughts on burbot status and trends in their areas of responsibility.

The baseline information collected from this study will be used to help develop the comprehensive fish and wildlife plan Montana Fish, Wildlife and Parks has agreed to develop in compliance with the Wildlife Conservation and Restoration Program (WCRP) and State Wildlife Grants Program (SWiG). This baseline data will also help enable resource managers to better understand and manage the spawning habitat use, spawning movements, and spawning timing of native sauger.

## **Accomplishments**

The Montana Cooperative Fishery Research Unit at Montana State University was contracted to complete the burbot status assessment. That assessment included a summary of known distribution data, site-specific descriptions of targeted and ancillary burbot monitoring, and management recommendations. This was compiled into a final report, which is included with this report. The Executive Summary of the report reads as follows:

“In Montana, burbot (*Lota lota*) are native to the Kootenai, Missouri, and Saskatchewan drainages. Despite that they are found throughout much of the state, little is known about their status. We were able to obtain and analyze trend data from several populations throughout Montana, but most of these data were from incidental catches while biologists were sampling for target species such as rainbow trout (*Oncorhynchus mykiss*), brown trout (*Salmo trutta*), or sauger (*Sander canadensis*). Thus, low sample size was a common problem with these data and made any conclusions regarding population trends relatively unreliable. Fisheries biologists throughout the state also agreed that data was limiting to reliably make any recommendations regarding the status of burbot in Montana. Where standardized long-term data sets exist, it appears that burbot abundance can be highly variable and may be related to discharge (e.g., Kootenai River, Montana, Idaho). Further, we found no evidence of a large-scale decline in burbot. Interestingly, we did observe consistently low relative weight ( $W_p$ ) values for burbot - likely a function of many populations occurring in lotic ecosystems. The current MFISH database ([www.map2.nris.state.mt.us](http://www.map2.nris.state.mt.us)) lists burbot throughout a larger area than reported by Brown (1971). However, the distribution expansion since 1970 is a function of the lack of records prior to 1970 not a rapid expansion of burbot throughout Montana. We recommend that standardized sampling be incorporated for burbot and that sampling for burbot be specifically targeted in areas that are identified as potential spawning and rearing habitat. Tracking population trends and status will be more productive in the future if burbot are targeted by fisheries biologists. Finally, research is needed on the population characteristics, habitat use, and early life history of burbot in Montana. Burbot are native to much of Montana, but still little is known about their status, usefulness as an indicator species, and function in fish assemblages.”

## **Variances**

None

### **Expenditure Recap:**

Proposed:

	Federal Share	Match	Total
Direct Costs	6,717.66	2,239.22	8,956.88
Indirect @ 18.9%	1,269.64	423.21	1,692.85
Total	7,987.30	2,662.43	10,649.73

Actual:

	Federal Share	Match	Total
Direct Costs	6,696.21	2,655.00	9,351.21
Indirect	1,265.59		1,265.59
Total	7,961.80	2,655.00	10,616.80

Indirect costs were assessed at actual, approved rates (18.9% for FY04, 17.87% FY05). The non-federal share of funding was in the form of waived overhead (41.5%) from Montana State University, which represented a value of \$2,655.00.

### **Project Personnel**

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